DOCUMENT RESUME

ED 164 959 CE 019 522

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TITLE Cultural Assimilator for Training Army Personnel in Racial Understanding.
INSTITUTION University City Science Center, Philadelphia, Pa.
SPONS AGENCY Army Research Inst. for the Behavioral and Social Sciences, Arlington, Va.
REPORT NO ARI-TP-314
PUB DATE Sep 78
CONTRACT DAHC-19-74-C-0013
NOTE 57p.; For related document see CE 019 521 ; Report prepared in collaboration with the ARI Field Unit at Presidio of Monterey, Calif.

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS *Acculturation; Armed Forces; Black Culture; *Blacks; Black Stereotypes; *Caucasians; Changing Attitudes; Cultural Awareness; Cultural Differences; Culture Conflict; Enlisted Personnel; Ethnic Stereotypes; Evaluation; Field Studies; Leadership Training; Methods Research; Military Training; *Multicultural Education; *Officer Personnel; *Race Relations; Racial Attitudes; Racial Discrimination; Racism
IDENTIFIERS Army; United States

ABSTRACT

A cultural assimilator was developed to teach white junior officers about black culture in the army. Scenarios involving misunderstandings between blacks and whites in the army were presented, and respondents were asked to identify "correct" reasons for the misunderstandings. In the first of three field tests respondents showed evidence of learning from assimilator training, but cultural sensitivity to black culture on a related measure did not increase, and stereotyping was not reduced. In a second assimilator field test subordinates rated their company commanders as being more effective in race relations when commanders demonstrated greater knowledge of black culture. However, this was true only for white and Hispanic subordinates and not for black subordinates. A third assimilator evaluation and follow-up showed that neither self-reports nor supervisor nor subordinate reports provided evidence that trained personnel were seen as being more effective in race relations than those who received no training. It was concluded that assimilator scenarios may be useful training aids as part of race-relations discussions but are not likely to have a strong favorable impact by themselves. (Author/CSS)

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ED164959

Technical Paper 314

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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CULTURAL ASSIMILATOR FOR TRAINING ARMY PERSONNEL IN RACIAL UNDERSTANDING

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Office, Deputy Chief of Staff for Personnel
Department of the Army

September 1978

Army Project Numbers
2Q162108A753
2Q763744A769

Racial Harmony Training

Approved for public release; distribution unlimited.

CE 019 522

U. S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES

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REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: Technical Paper 314	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): CULTURAL ASSIMILATOR FOR TRAINING ARMY PERSONNEL IN RACIAL UNDERSTANDING	5. TYPE OF REPORT & PERIOD COVERED: Final (Nov 73 to Feb 75 and Jan 77 to Dec 77)
	6. PERFORMING ORG. REPORT NUMBER: --
7. AUTHOR(s): Hart, Roland J., Day, Harry R., Landis, Dan, and McGrew, Penny L.	8. CONTRACT OR GRANT NUMBER(s): DAHC 19-74-C-0013
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Center for Social Development, University City Science Center, 3508 Science Center, Philadelphia, Pennsylvania 19104	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: 2Q162108A743; 2Q763744A769
11. CONTROLLING OFFICE NAME AND ADDRESS: U.S. Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Avenue, Alexandria, Virginia 22333	12. REPORT DATE: September 1978
	13. NUMBER OF PAGES: 48
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): Office of the Deputy Chief of Staff for Personnel, Washington, DC 20310	15. SECURITY CLASS. (of this report): Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

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18. SUPPLEMENTARY NOTES

This report describes both research under contract DAHC 19-74-C-0013 and follow-up research by personnel of the ARI Field Unit at Presidio of Monterey, Calif.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Race relations in the Army
Race relations/equal opportunity
Race-relations training in the Army
Cultural assimilator
Effectiveness of cultural assimilator
Evaluating cultural assimilator
Leadership training in race relations

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

A cultural assimilator was developed to teach white junior officers about black culture in the Army. Scenarios involving commonly occurring incidents of misunderstanding between blacks and whites in the Army were presented, and respondents were asked to identify the "correct" reasons for these misunderstandings. The effectiveness of this cultural assimilator as an Army race-relations training technique was evaluated in three separate field tests, with mixed results. In the first evaluation respondents showed evidence of learning from

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20.

assimilator training; but cultural sensitivity to black culture on a related measure did not increase, and stereotyping was not reduced. In the second evaluation, subordinates rated their company commanders as being more effective in race relations when these commanders demonstrated greater knowledge of black culture, as measured by assimilator performance. However, this was only true for white and Hispanic subordinates and not for black subordinates as was expected. The assimilator was implemented as part of a 1-day race-relations seminar for command personnel in an Army Reserve Unit in the third evaluation. Effectiveness of training was evaluated 2 months later by a survey. Neither self-reports nor reports of supervisors or subordinates provided evidence that trained personnel were seen as being more effective in race relations than those who received no training. One problem associated with this assimilator may have been poor identification of the "correct" answer for some scenarios. Assimilator scenarios may be useful training aids as part of race-relations discussions but are not likely to have a strong favorable impact by themselves.

FOREWORD

Since 1972 the Army Research Institute has been active in research on the policy, operational problems, and programs of the Army's Race Relations/Equal Opportunity (RR/EO) program. One objective of the Army RR/EO Research Program in FY 1973 was the development of alternative modes of RR/EO training to supplement the existing program. ARI Technical Paper 310 describes the earlier research on the culture assimilator approach to race-relations training. This technical paper evaluates the effectiveness of the culture assimilator as a race-relations training technique. The early research was conducted, under Army Project 2Q162108A743 "Race Harmony Promotion Programs" in the FY 1974 Work Program, as an in-house effort augmented by contract DAHC 19-74-C-0013 with University City Science Center. Additional evaluation research was done under Army Project 2Q763744A769 "Army Contemporary Issues Development," in the FY 1977 Work Program by ARI personnel at the Presidio of Monterey Field Unit.

Joseph Zeidner

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Technical Director (Designate)

CULTURAL ASSIMILATOR FOR TRAINING ARMY PERSONNEL IN RACIAL UNDERSTANDING

BRIEF

Requirement:

To develop a cultural assimilator designed to teach white junior officers about black culture in the Army and to evaluate the effectiveness of this cultural assimilator as a tool for increasing understanding between whites and blacks in the Army.

Procedure:

Assimilator scenarios were developed based primarily on interviews with black and white soldiers about commonly occurring incidents of misunderstanding between blacks and whites. Panels of experts developed questions about the misunderstandings and "correct" answers reflecting knowledge of black Army culture.

The effectiveness of this assimilator as an Army technique for training junior officers in race relations was evaluated in three separate field tests. In the first evaluation, the performance of blacks and whites on the assimilator was compared, evidence for learning over time was examined, and assimilator training was related to a test for intercultural sensitivity and a measure of stereotyping. In the second evaluation, the performance of company commanders on the assimilator was related to their effectiveness in race relations as seen by white, black, and Hispanic subordinates. In the third evaluation, the assimilator was implemented as part of a 1-day race-relations seminar for command personnel in an Army Reserve Unit. Effectiveness of training was evaluated 2 months later by a survey using an appropriate experimental design.

Findings:

Results from the three field tests were mixed. In the first evaluation blacks were more familiar with assimilator scenarios and performed better on these items than did whites. Blacks in the Army were expected to be more familiar with their own culture than were whites with black culture. Both blacks and whites showed evidence of learning with difficult, task-oriented assimilator items. However, assimilator training (a) did not lead to improved scores on a test of intercultural sensitivity, (b) did not reduce stereotyping, and (c) was not evaluated as favorably as race-relations seminars.

If assimilator training has a positive impact on subordinates, company commanders who demonstrate knowledge of black culture should be rated as effective in race relations by subordinates. In the second evaluation, white and Hispanic subordinates rated those commanders as being more effective in race relations who demonstrated greater knowledge of black culture as measured by assimilator performance. Black subordinates did not.

In the third evaluation, Army Reserve command personnel who had received assimilator training were compared to those who had not. Self-reports or reports of supervisors or subordinates showed no evidence that trained personnel were seen as being more effective in race relations than those who had received no training.

Methodological problems in each of the three evaluations rendered conclusions tentative. Debate on the correctness of the answer labeled "correct" arose at several points.

Utilization of Findings:

The cultural assimilator designed to teach white junior officers about black culture in the Army is available for use as an aid for training junior officers in race relations. The assimilator consists of four volumes (60 items). The data suggest that the difficult, task-oriented items are best and should be used first. Because there is some question about the correctness of some "correct" answers, assimilator scenarios should be used as a basis for discussing and bringing to light relevant issues rather than as a stand-alone technique. It should be recognized that assimilator training alone is unlikely to have a strong favorable impact on a leader's effectiveness in race relations.

CULTURAL ASSIMILATOR FOR TRAINING ARMY PERSONNEL IN RACIAL UNDERSTANDING

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CULTURAL ASSIMILATOR FOR TRAINING ARMY PERSONNEL IN RACIAL UNDERSTANDING

CHAPTER 1

The research described in ARI Technical Paper 310 (Landis, Day, McGrew, Thomas, & Miller, 1978) involved the development and field testing of a programed instruction approach to race-relations training. The specific technique for that project involved developing a culture assimilator for junior grade officers. A cultural assimilator provides information to help individuals of one cultural background understand better the point of view of individuals of another cultural background. The cultural assimilator is not intended to make a person of one cultural background similar to a person of another cultural background. The aim is to provide a basis for a functional understanding of another cultural perspective. The goal should be an appreciation for cultural diversity rather than pressure toward cultural homogeneity, as perhaps implied in the term "assimilator." The technique was designed to be aimed primarily at white junior grade officers.

In general, the results of the field test of the pilot assimilator indicated: (a) the sample of problems in the assimilator represent a set of events far more familiar to black officers than to whites; (b) blacks obtained higher scores on the assimilator than whites; (c) evidence of learning on the part of the white officers as a function of assimilator training was obtained; and (d) evidence, though not strong, showed that both attitudes and knowledge changed as a function of the training. These results demonstrated that the assimilator was a potentially valuable technique for use in the U.S. Army race-relations training program.

The project reported here extended the research efforts of the previous project. The assimilator aimed at (white) junior grade officers was further developed (Kirkland & McGrew, 1975) and subjected to a second preliminary field evaluation in test format and then a major field test both at domestic and overseas bases. This work is described in the succeeding pages of chapter 1.

METHOD

Development of the Assimilator

In the following discussion of item development, it should be recalled (Landis et al., 1976) that an item consists of a "critical incident," or scenarios of an incident involving conflict, misunderstanding, or the avoidance of conflict and misunderstanding between members of different cultural/race groups. A question at the end of each incident asks about the behavior or probable attitude of one of the "antagonists," with four alternatives or possible explanations. One alternative is "correct"

in that it used relevant knowledge about the culture group represented in the incident. The three other alternatives use information that is faulty, incomplete, or stereotypical in nature; i.e., one could "jump to that conclusion." On choosing an alternative, the respondent is directed to the appropriate corresponding rationale or discussion of why the choice is or is not correct.

For this study, items were pooled from a number of sources. Some items were gathered from audiotapes of the original interviews that were incompletely used for the pilot white officer assimilator. Other items from that earlier assimilator were chosen because they required the least revision and performed well originally. Fewer items from the extant civilian, industrial assimilator were used in the present study than in the earlier one. Those items retained were judged good enough to revise in order to meet higher and more comprehensive standards. The items also were judged general enough so that not only were they broadly applicable to the military setting but also would be helpful in future tests for standardizing the assimilator.

Added to these items were items generated by two item development teams, the Delaware State College team and the Center for Social Development (CSD) staff. The Delaware State team was multiracial, military-experienced, and comprised of "mature" students and staff; that is, the students were in their twenties and early thirties. The CSD staff was also multiracial and included military-experienced members, with valuable aid from a retired career officer acting as a consultant.

As items were drawn from the various sources, one member of a team wrote first drafts. From the first draft stage, a single item went through a process of multiple review and rewrite until it could satisfy criteria of acceptability. Stylistically, it had to be a coherent, understandable, readable, self-contained description of an event or series of events. The statements, responses, and behavior of persons portrayed in the critical incident had to be realistic and valid from a "human" point of view, as well as accurate and reasonable for persons in the military setting.

The "incorrect" alternatives were representative of prevailing misconceptions, stereotypes, etc., or were reasonable choices if the subject had been careless in his reading of the incident. Each incorrect alternative had at least a surface reasonableness so that none could be dismissed automatically. Correct alternatives were subjected to close scrutiny because, through corresponding rationales, they were to lead the reader into the most detailed explication of some aspect of the culture being portrayed. All alternatives were carefully reevaluated by all members of a team.

Rationales were more comprehensive and were the subject of intensive effort. Rationales that explained the "error" of incorrect choices were potentially more valuable as a teaching tool than those that confirmed correct choices. More can often be learned from clear, valid information

about mistaken attitudes and beliefs than from confirmations of fortuitous correct guesses. For these reasons, rationales in all items (including those from the previous assimilator) were created or improved to meet the requirements described.

Once an item met all criteria by unanimous agreement of team members, it was run through three final reviews. The first was an obvious check for mechanical accuracy, e.g., grammar, spelling. Second, our consultant on black culture made a final check for the cross-cultural validity of the message conveyed for the culture/race groups involved. Third, our military consultant made a final content review for military accuracy and validity.

After the items for the assimilator were developed, their order of presentation in the volumes was randomly determined. This was done to control for possible systematic biases related to the order of item development, e.g., new items were interspersed rather than placed all at the end. Four assimilator volumes of 15 items each resulted. The four volumes (60 items in all) were designed for white junior grade officers.

The branching and linear modes are the two principal formats used in administering cultural assimilators. In the branching mode, subjects select what they consider to be the best option and are referred to its corresponding rationale. If incorrect, subjects are directed to choose from among the remaining alternatives and to read the rationale. Subjects continue this procedure until they have selected the correct option, then proceed to the next item. Thus, if they have selected the correct option on the first try, they read only its corresponding rationale before going on.

In the linear mode, subjects first rank the four alternatives from best to worst. They read all the rationales before moving on to the next items (even if they have been correct in their first choice). In this way, subjects read all the material associated with an item. The linear mode involves more time both because of the process of ranking alternatives and because of the amount of material read.

Malpass and Salancik (1972) compared these two formats for a culture assimilator involving the economically disadvantaged in a civilian industrial setting (Slobodin et al., 1972). They found that for the "easier" items, the branching mode was superior. For the more difficult items, the linear mode was superior. As expected, subjects took longer to go through items in the linear mode.

Upon reviewing the content of the industrial assimilator, we felt that the differences in subject performance in the two modes might have resulted from the relatively meager information contained in any single alternative's rationale. If all the rationales were enriched so that an individual received considerably more information through reading even a single rationale, the branching mode could approach the effectiveness

of the linear mode with less expenditure of time by the subjects. Also, subjects would not have to read nonessential materials that otherwise might detract from the conciseness of the points made.

The branching mode is also more consistent with other military training materials. Finally, this response mode is the most straightforward and the least subject to misunderstanding and errors in response to instructions. Therefore, we used the branching mode in the administration of the assimilator.

The cultural assimilator was related to the previous assimilator project. There was, however, much more involved in the revised version than the simple cross-validation of previously developed items. First, the target audience--white junior grade officers--was made more explicit, rather than implicit as in the previous assimilator. Second, substantially more information was incorporated into the assimilator rationales than previously (particularly the rationales for the "incorrect" alternatives). Third, a strenuous effort was made to develop a briefer assimilator composed of fewer, but more effective, items. This latter goal was based on the feeling that too long an assimilator would cause fatigue or have other negative effects, and on evidence that the more difficult and discriminating items have the greatest impact on learning.

Data Gathering Design

Four domestic bases and four garrisons in Germany served as the sites for the field test of the white officer assimilator. The principal factor in the choice of these sites was the sufficient population of black junior grade officers. At the domestic CONUS installations, 90 white and 80 black officers, almost evenly divided between installations, were asked to participate. In Europe, 40 white and 40 black officers, evenly divided between garrisons, were asked. At the CONUS installations, 75 white and 75 black enlisted men (EM), with paygrades between E1 and E4, were also asked to participate, working on the white junior officer assimilator. In Europe, 40 white and 40 black EM (E1-E4) were requested for the purpose of evaluating the assimilator, with the numbers approximately divided between installations.

There was very high attrition in the samples because soldiers did not show up and because of errors in data or incomplete data. Completion criteria were strict for data acceptability; for example, subjects were not retained for the analysis of the Comparative Evaluation Questionnaire (CEQ) (described later) if they had not responded to at least 8 out of 10 of the first 10 assimilator items and 8 out of 10 of the last 10 assimilator items, as well as to all four training techniques on all scales of the CEQ. Only approximately 30% of the soldiers requested were obtained and provided data complete enough for analysis.

The officers assigned to the white officer assimilator completed Volumes 1-4 (60 items). The EM assigned to this condition completed only two volumes (either Volumes 1-2 or Volumes 3-4). The reason for assigning EM to fewer volumes was the fear that because of possibly lower reading skills than officers, EM might not otherwise complete all the materials (assimilators, plus evaluative questionnaires) within the time limit. This plan fortunately provided a design for better interpretation of the somewhat complicated results for these volumes, as discussed later.

Ancillary Measures

Ancillary measures are questionnaires completed by subjects so that the effectiveness of the cultural assimilator can be evaluated. The ancillary measures were not part of the assimilator itself. There were three different types of ancillary measures.

Comparative Evaluation Questionnaire (CEQ). The CEQ consisted of eight 7-step, bipolar adjective scales. Five of the scales were from the American-English-Pan-Cultural Semantic Differential (Osgood, 1971), two from the Evaluative factor (good-bad, useful-useless), two from the Potency dimension (strong-weak, exciting-dull), and one from the Activity dimension (active-passive). Three other scales were added to tap dimensions specifically related to race-relations training programs (interesting-uninteresting, like-dislike, and informative-uninformative).

Test for Intercultural Sensitivity (TICS). TICS, described by Weldon et al. (1974), consisted of a set of assimilator-type items in test format; that is, the feedback element was deleted. Although the items dealt with black-white interactions, they were set in an industrial-civilian setting. The Weldon items were chosen because they involved an area of cross-cultural training most germane to the Army study (race relations) and they were involved in the most rigorous attempt to date to validate a culture assimilator, i.e., using task performance measures as well as subjective scales.

Randomly selected from the 50 items in the Weldon pool were 11 items. These items were divided into two groups of five and six items. A given subject would take one form before the assimilator and the other form after. The A-B, B-A order was counterbalanced over subjects so that approximately equal numbers of respondents from within each group received each sequence.

Stereotyping Questionnaire (SQ). An assimilator should reduce the tendency to stereotype members of another ethnic/racial/cultural group. The SQ was designed to measure change in these tendencies as a function of the assimilator experience.

The SQ consisted of a person concept, e.g., black EM, and a set of 10 attributes, e.g., trustworthy, intelligent. The subject indicated on an 8-point scale from "never" to "always" the probability that the person concept possessed each attribute listed. The 10 attributes were the same across all person concepts and were rated by all subjects: intelligent, lazy, brave, unimportant, aggressive, active, helpful, tough, hardworking, and trustworthy. Ten person concepts were rated by all subjects: black colonels, white colonels, black company commanders, white company commanders, black officers, white officers, black noncommissioned officers (NCOs), white NCOs, black EM, and white EM.

The SQ concepts and attributes were taken from a questionnaire previously pilot-tested on black and white Army officers. The format was based, in turn, on measures used by Triandis (1972) and Landis, Day, McGrew, and Miller (1973) in studies of stereotyping across cultural boundaries.

The 10 concepts chosen were divided randomly into two sets, designated A and B. A given subject received one form before and the other form after the assimilator. The A-B, B-A order was counterbalanced so that an approximately equal number of subjects in each group received each combination.

Presentation of Ancillary Measures. The various ancillary, evaluative measures were administered as follows:

1. All subjects completed an extensive biographical questionnaire prior to training.

2. All subjects completed the TICS, with one form given before and the other form after training.

3. Half the subjects completed an SQ, with one form given before and the other form after training.

4. All subjects rated the assimilator and three other race-relations training techniques on an 8-point scale semantic differential (CEQ) after training.

RESULTS

The design of the project resulted in a large quantity of data on which many analyses could be performed. The results reported are those considered to be most useful.

Analyses fall into four main categories. The first category includes a tabulation of the characteristics of the assimilator. The second category includes discriminative properties of the assimilator. Two types of

measures were used here: (a) a rating of content familiarity and (b) assimilator performance. This body of data is included to help validate the assimilator. If the assimilator truly teaches about black culture in the Army, the critical incidents described should be more familiar to blacks than to whites; blacks should perform better on these items than whites.

The third category of data includes evidence of learning based on data internal to the assimilators. In other words, if white subjects are learning about black culture as they progress through the 60 assimilator items, they should be answering more items correctly toward the end of the assimilator than at the beginning. Typical learning curves should result, showing improvement of white subjects over trials. Items were summed over blocks of 10 items to provide sufficient reliability for the analysis.

The fourth category of data includes evidence of learning or impact based on data external to the assimilator. This category of data examined the impact of the assimilator on (a) subjects' evaluations of various kinds of race-relations training (using the CEQ), (b) the TICS, and (c) the SQ. Assimilator training, if it is to be considered effective, should produce a favorable evaluation of the training by subjects who have completed it, evidence of greater cultural sensitivity on the TICS, and a reduction of stereotyping.

Characteristics of Assimilator Items

A content analysis on every assimilator item provided an overview of the type of items in the assimilator. Of the 60 items, 57 came from the Army pools of items and 3 from the civilian. Of 60 items, 43 occurred on post, 5 off post, with the rest either on and off post or unspecified. Blacks were evaluated in 34 item incidents, whites in 10, and the rest of the items evaluated both. Officers were evaluated in 24 of the 60 incidents. The items contained 30 incidents that occurred while persons involved were on duty, 21 involved incidents that occurred off duty, with the rest unspecified.

Finally, it was noted whether the incident was social or task-oriented (or both) in nature. An item was labeled task-oriented if a person's position as a member of the Armed Forces was directly involved. An item was labeled social if a person's position was irrelevant to the interaction, i.e., it could have occurred in a non-Army setting. From the 60 assimilator items, 20 were social, 36 were task, and 4 had characteristics of both. This latter characterization of assimilator items was found useful as noted later.

Discrimination by the Assimilator

Item Familiarity Ratings. Each assimilator item was rated on a 7-point scale on its familiarity to the respondent. In general, if we were successful in sampling relevant interracial problems, then we would expect the familiarity ratings by black soldiers to be significantly higher than those of white soldiers.

Table 1 has Sign Test and Wilcoxon statistics (Siegel, 1956) for the officers and EM responding to the cultural assimilator items, and Table 2 shows the mean familiarity scores. Black officers rated the items in Volumes 1-4 as more familiar than did white officers ($p < .0001$ on all four tests in Table 2). The same was true for black EM on Volumes 1-2 ($p < .0001$ on all four tests). For Volumes 3-4, the black EM also tended to rate the items as more familiar, but only one of the four tests was highly significant ($p < .0074$, the Wilcoxon for EM in Germany). As Table 2 shows, in every case blacks rated the items as more familiar than did whites. Black officers rated the items as more familiar than did the black EM. The white officers' and white EM's ratings were essentially the same. The lowest black familiarity score was higher than the lowest white familiarity score.

The analyses clearly suggest that the situations depicted in the assimilator may have been experienced by black soldiers or at least perceived by them to represent familiar problems. Conversely, white soldiers are comparatively less familiar with these problems. The pattern of familiarity ratings is consistent with what would be expected, given the nature of the target groups, the items, and the goal of the assimilator. Specifically, blacks rate items as being more familiar than do whites. Black officers rate items as more familiar than do black EM. By contrast, white officers and white enlisted soldiers differ little, rating items as relatively unfamiliar.

Black-White Performance Differences. Two measures of performance were used in looking at the black-white performance differences: (a) the percentage of subjects correct on their first response and (b) a weighted score, using a weighting system that gives progressively decreasing weights from correct responses on the first choice through correct responses on the fourth choice. A weight of 10 was given to a correct response on the first try, 6 to a correct response on the second try, 2 to a correct response on the third try, and 1 to a correct response on the fourth try.

Sign Tests and Wilcoxon Signed Rank Tests comparing blacks and whites were performed on the weighted scores and on the proportion of each group selecting the "correct" answer on the first trial. These analyses indicated that black performance was significantly better than white performance for the items in the assimilator (Table 3). In general, black officers' performances are superior to that of white officers (with all eight tests in the expected direction, four significant at the $p < .04$

Table 1

Comparing Familiarity of Blacks and Whites with Assimilator Items

	Officers (Volumes 1-4)		Enlisted men (Volumes 1-2)		Enlisted men (Volumes 3-4)	
Test statistic	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Sign Test						
Number of differences	60	60	30	30	30	30
Minimum sum of signs	60	54	28	27	19	19
p value	.0001	.0001	.0001	.0001	.1006	.1006
Wilcoxon						
Number of differences	60	60	30	30	30	30
Minimum sum of tasks	.0	32.00	8.000	24.00	177.50	114.00
Z score	6.74	6.50	4.62	4.29	1.13	2.44
p value	.0001	.0001	.0001	.0001	.1290	.0074

level or better). The same is true for black EM on Volumes 1-2 and Volumes 3-4 (with all 16 tests in the expected direction, 10 significant at the $p < .05$ level or better).

Table 2

Mean Familiarity Ratings

Race	Officer (Volumes 1-4)	Enlisted men (Volumes 1-2)	Enlisted men (Volumes 3-4)
Black	4.23	3.78	3.54
White	3.30	3.15	3.35

The results of the Performance analyses parallel the results of the Familiarity analyses: In every test performed on the data, black soldiers performed better than white soldiers, significantly better in most cases. The assimilator functioned as expected in terms of black versus white knowledge of interracial problems, although a larger black-white difference perhaps could have been expected.

Effectiveness of the Assimilator Based on Evidence of Learning

The principal measure of learning was the weighted score comparing the performances of blacks and whites. This weighted score gives a higher score to selection of the correct answer with little or no delay and a low score to selection on the third or fourth try. For this analysis, the assimilator was divided into 10 item sections. Blocks of 10 items were summed to give sufficient reliability to the analyses. Then the trends for learning over these blocks of 10 items were examined to find evidence of a "learning curve," or an increase in performance over trials.

In general, performance in terms of weighted scores should increase as subjects work through their volumes, particularly in the case of subjects for whom the assimilator is targeted. The more difficult items in the pilot assimilator (Landis et al., 1976) had shown such a trend for white officers (the target group), which was gradual but significant.

Although there was evidence of fatigue on the easier items, such effects did not overwhelm the continuous increase in performance on the more difficult items. Because the item-development process was aimed at creating more "powerful" items, it was anticipated that learning would be more pronounced with this than with the pilot assimilator and that fatigue also should be less pronounced.

Table 3

Comparing Performances of Whites and Blacks on Assimilator Items

Proportion right on first try	Officers (Volumes 1-4)		Enlisted men (Volumes 1-2)		Enlisted men (Volumes 3-4)	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Sign Test						
Number of differences	60	60	30	30	30	29
Minimum sum of signs	38	34	19	22	24	17
p values	.0264	.1831	.1006	.0088	.0010	.2288
Wilcoxon						
Number of differences	60	60	30	30	30	29
Minimum sum of ranks	372.50	846.50	115.50	125.00	37.50	196.00
Z scores	1.79	0.50	2.41	2.21	4.01	0.46
p values	.0371	.3070	.0081	.0135	.0001	.3210
Weighted score						
Sign Test						
Minimum sum of differences	60	60	30	30	30	30
Minimum sum of signs	36	40	20	20	22	15
p values	.0778	.0071	.0500	.0502	.0088	.5000
Wilcoxon						
Number of differences	60	60	30	30	30	30
Minimum sum of ranks	659.00	776.00	149.00	138.00	84.00	191.00
Z scores	1.88	1.02	1.72	1.94	3.05	0.85
p values	.0297	.1531	.0429	.0260	.0011	.1967

Figure 1 shows the results for both officers and EM. As anticipated, based on previous experience and the expectation of ceiling effects, the data for the "easy" items showed no improvement. A decrement in performance for both the officers and EM is probably attributable to fatigue.

Looking first at the officer data for the more difficult items, several observations would seem appropriate:

1. The black officers tended to perform better than the white officers, as anticipated.

2. The performance of white officers increased through the first 40 items, then dropped on the last 20 items, although remaining above the initial performance on the assimilator.

3. The black officers showed the same general type of performance curve as the white officers, a result not previously found nor expected here.

Looking at the EM data helps to clarify the interpretation of the officer data. For the EM taking Volumes 1-2, the EM performance curves were parallel to the officers' performance curves through those volumes; but the EM performance tended to be better than for the officer's. The black EM tended to do best and, in a sense, can be considered a criterion group for this assimilator. It would, therefore, be anticipated that their performance would be best, provided reading skills were not an overwhelming factor.

For the EM taking Volumes 3-4, the EM performance curves were very different from the EM taking Volumes 1-2. To some degree, the curves were again similar to the officer curves, and the black EM again performed better overall than the white EM, although not better on the first 10 items. This time, however, the EM's (black and white) performances were generally worse than for the officers. Despite randomization procedures, the items in Volumes 3-4 appear in some way different from the items in Volumes 1-2.

How can these somewhat complicated results be interpreted? First, white (and apparently also black) officers appear to be learning through the first 40 items, as anticipated. The rate of improvement on these items is very substantially greater than for a comparable number of items on the previous assimilator (1.3 units of weighted score versus approximately .2 units of weighted score), as intended. Second, apparently something is unique about the content and order of the items in Volumes 3-4 that leads to a higher initial level of performance, compared to Volumes 1-2, and also yields a decrement (or lack of improvement in the case of black EM) rather than an increment in performance.

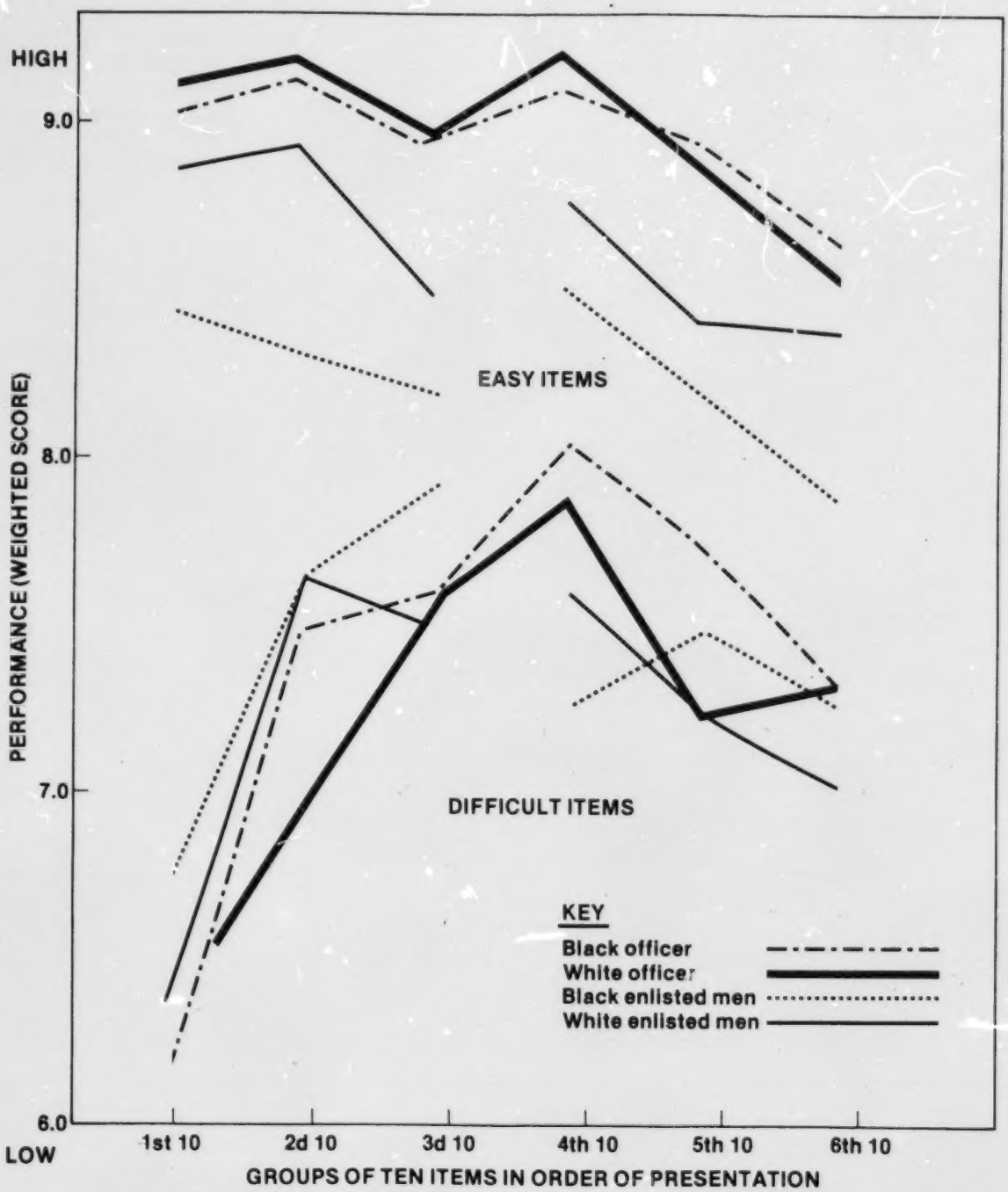

Figure 1. Learning curves of black and white officers and enlisted men.

This second observation is clear in the EM data and appears to be an interactive factor superimposed on the officer data. Finally, fatigue (or progressive carelessness) seems to be a third factor superimposed on the data, despite the hope that shorter volumes would mitigate against fatigue. The last effect, however, may have been partly caused by the effort required to complete the pretest ancillary measures (substantially more than in the previous field test). It may be that 30 to 40 items are the optimal number to be given in an assimilator at any one time.

Figure 2 shows the officer data for Volumes 1-4 broken down in terms of domestic versus foreign assignment. It is clear that the form of the curves is essentially identical for subjects stationed overseas and subjects stationed stateside. This result argues both for the general applicability of this assimilator and for the general stability of the response data.

To attempt to account for the performance differences on Volumes 1-2 compared with those on Volumes 3-4, the content data were reviewed separately for those two pairs of volumes. The Task versus Social content proved to be the most illuminating (Table 4). Despite the randomized assignment of items to volumes, Social items are underrepresented in Volumes 1-2 and overrepresented in Volumes 3-4, relative to the overall proportion in the four volumes combined ($\chi^2 = 3.52$, $p < .07$).

Table 4

Task versus Social Situations

	Situations[a]		
Volumes	Social	Task	Total
1-2	7	22	29
3-4	13	14	27
Total	20	36	56

[a]Four items that could not be categorized exclusively as Social or Task were omitted.

This association of the relative numbers of Task versus Social items with performance across assimilator items may well be a factor in the difference between Volumes 1-2 and Volumes 3-4. It may be better to concentrate exclusively on Task-oriented items. This suggestion would seem

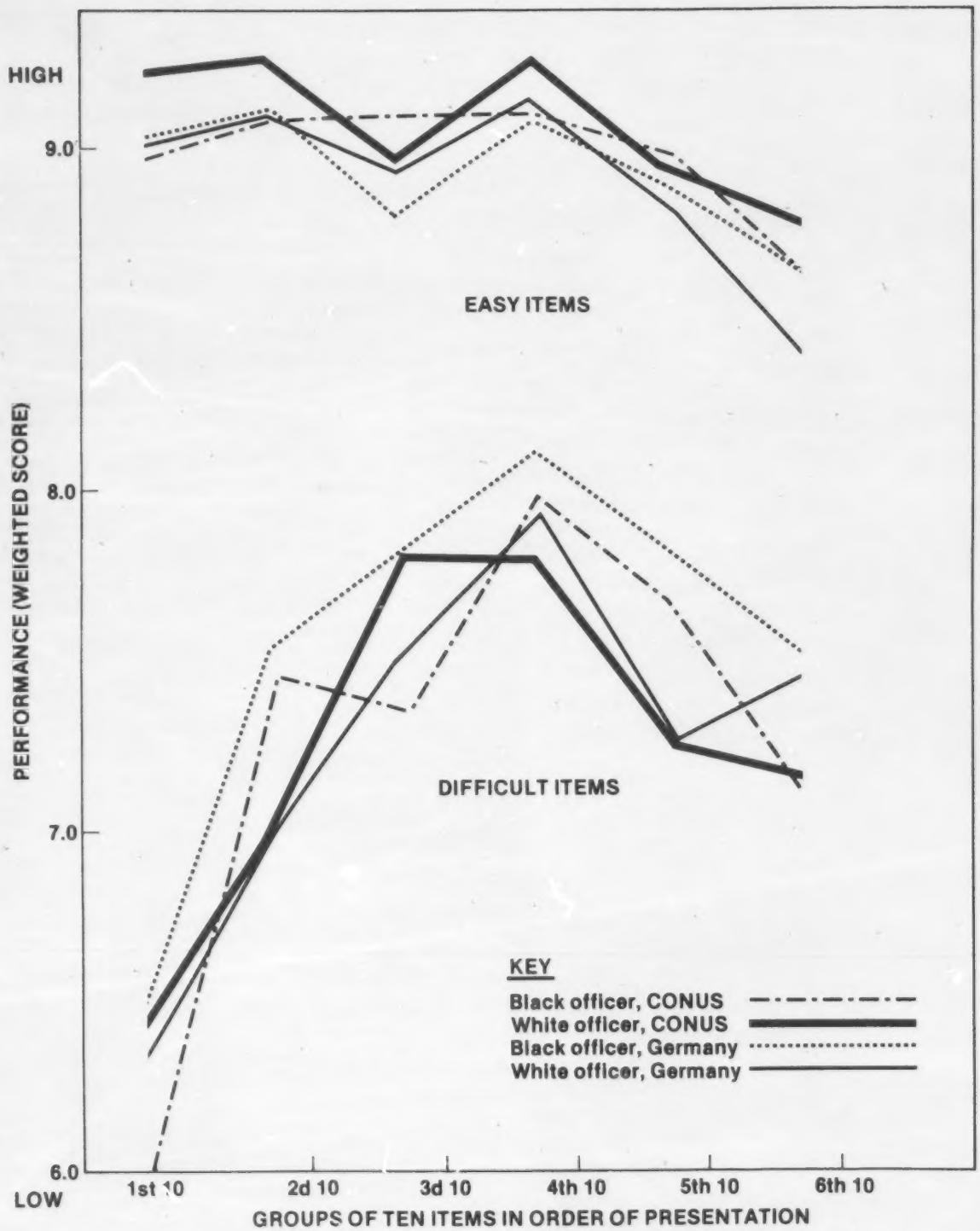

Figure 2. Learning curves for black and white officers stationed in Germany versus those stationed in the United States.

supported also by the research of O'Brien, Fiedler, and Hewitt (1971), who found that subjects trained on their wholly Task-oriented assimilator produced the clearest significant, independently measured improvement in performance to be found in culture assimilator literature.

Effectiveness of the Assimilator Based on External Evidence

Subjects' Evaluations of the Assimilator on the Comparative Evaluation Questionnaire. The CEQ asked respondents to rate four training concepts (assimilator, racial attitudes and perceptions (RAP) sessions, lecture on black history, and training manuals on minority culture) on the eight semantic differential scales: interesting, strong, like, useful, active, exciting, good, and informative.

The subjects' evaluations of the assimilator on the eight semantic differential items were analyzed first using analysis of variance. Race (black, white), rank (officier, enlisted), and level of improvement (improvement, no change, decrement) on the assimilator were the independent variables in this analysis. The eight semantic differential ratings of the assimilator were the dependent variables. The index of improvement was computed by summing the weighted scores on the first 10 and last 10 items and then taking the difference between the sums. The sums were weighted to account for missing data. The distribution of the improvement scores was divided at the 66th and 33rd percentiles to produce three levels of improvement, labeled improvement, no change, and decrement.

Eight analyses of variance were computed on each dependent variable. There were no significant differences for the two independent variables: Level of Improvement and Rank. In other words, those who improved most on the assimilator did not evaluate the assimilator differently from those who did not improve or who showed a decrement in performance. Officers and EM did not evaluate the assimilator differently. There were, however, racial differences. For example, on the strong-weak scale, we see a pattern that is repeated on all the scales. Black respondents rated the assimilator more favorably than white respondents. The difference was significant for the strong-weak item ($F = 8.58$, $df = 1, 134$, $p < .001$).

In a second analysis, subjects' evaluations of the assimilator were compared to their evaluations of RAP sessions, lecture on black history, and training manuals on minority culture. The purpose of this comparison was to see how favorably assimilator training was evaluated compared to other common forms of race-relations training. Analysis of variance was again used to make these comparisons, this time using a repeated measures design. The four methods of training constituted the independent variable, and each of the semantic differential scales constituted the dependent variables.

The following planned comparisons were made: (a) assimilator training versus RAP sessions, (b) assimilator training versus lecture on black

history, and (c) assimilator training versus training manuals on minority culture. Analyses were run on each of the eight dependent variables for each of these three comparisons. These comparisons are, of course, not orthogonal. Because multiple comparisons are being made with nonorthogonal contrasts, some effects will show significance due to chance. These tests, however, do give an overview of the data.

In the comparison between the assimilator and RAP sessions, the two techniques were rated differently on five of the eight scales. Because of the high number of significant effects, this difference does not look like it was due to chance alone. The assimilator was rated as less strong ($F = 7.7$, $p < .01$), less active ($F = 17.8$, $p < .001$), less exciting ($F = 18.2$, $p < .001$), less good ($F = 4.5$, $p < .05$), and less informative ($F = 7.5$, $p < .01$) than RAP sessions. In the eyes of the respondents, the assimilator did not compare favorably to RAP sessions.

In comparison between the assimilator and the lecture on black history, the assimiltor was viewed as less informative ($F = 16.3$, $p < .001$) than the lecture. None of the other effects were significant in the comparison between the assimilator and the lecture on black history. The assimilator was not rated as being significantly different from either the lecture on black history or the training manuals on minority culture.

The Effect of the Cultural Assimilator on the Test of Intercultural Sensitivity. The difference between subjects' responses before and after training on the TICS was examined. Assimilator training on the Army assimilator should have the effect of producing an improved score on the TICS. The TICS items were developed and validated in a civilian setting for the purpose of teaching white supervisors about the culture of blacks in high unemployment areas. This setting is removed from the Army culture, but there should be some overlap in the concepts in both instruments.

Two forms of the TICS were given. Subjects responded to either Form A or Form B prior to receiving the assimilator training and the other form after training. Thus, by comparing those subjects who received Form A first against those who received Form A after training, we can assess the effect of training on TICS, without the confusion caused by a prior administration of TICS on the posttest.

The two dependent variables were responses to attribution and behavioral questions. Each TICS item has two questions and four options each. One question asks about the reason for the behavior of a protagonist, usually the minority individual, in the scenario. The second question asks what the majority person should have done to resolve the problems described in the item. Thus, the first type of question refers to attributions made about minority individuals, and the second refers to appropriate behaviors. The attributions and behavior ratings became the two dependent variables in the analyses that followed.

Weights ranging from zero to 4 were assigned to the four alternative answers that were possible for both the attribution and behavior questions

on the TICS. These weights, based on the "cross-race majority agreement" scheme used by Weldon et al (1974), reflect the results of a pretest of TICS given to a group of middle-class whites and lower-class urban blacks. When the majority of both blacks and whites agreed that a particular option was a "good" response, this option was assigned a weight of 4. Table 5 shows the system of weights used.

Table 5

Key for Assigning Weights to a Given Option According to Black-White Pretest Agreement on Its Correctness

White opinion	Black opinion		
	Majority agree	Judgments divided	Majority disagree
Majority agree	4	2	0
Judgments divided	3	1	0
Majority disagree	2	0	0

Although the system shown in Table 5 places somewhat greater weight on the response of the black pretest group, it still gives the most weight to interracial agreement.

Assimilator training should not only improve performance on the TICS so that subjects score higher after taining than before, but also the greater improvement should come from those who improved the most on the Army assimilator. For this reason, two primary independent variables were used to analyze these data: the Trained-Untrained (or pretraining, posttraining) variable and the Level of Improvement variable, which had three levels. Multivariate analysis of variance was used to analyze these data, using the two independent and two dependent variables mentioned previously. The multivariate tests were followed by univariate analyses of variance on the two dependent variables, given a significant multivariate test. Multivariate analyses were computed separately for three samples: (a) the sample of officers who completed Volumes 1-4 of the assimilator, (b) the sample of EM who completed Volumes 1-2, and (c) the sample of EM who completed Volumes 3-4.

The analyses based on the officer sample are presented first. The multivariate F ratio for the trained versus untrained condition approached significance ($p < .10$). There was a significant ($p < .05$) decrease on the dependent variable related to estimating appropriate behaviors in the direction away from black and white agreement, contrary to what was expected. This could imply either a decreased sensitivity to black culture after training or a shift in the direction of reporting alternatives that blacks accept and whites initially reject. These alternatives are discussed later.

The results based on the sample of EM who completed Volumes 1-2 of the assimilator are described next. The multivariate F for the assimilator trained versus untrained condition was significant ($p < .01$), as were the F tests for univariate analyses of variance on the attribution dependent variable ($p < .01$) and the dependent variables estimating appropriate behaviors ($p < .05$). Again, these means decreased from near 4 to near 3, contrary to what was expected. The implication is either decreased sensitivity, or a shift in the direction of the perspective that blacks hold exclusively and with which whites initially disagree.

The results based on the sample of EM who completed Volumes 3-4 of the assimilator were not significant. No significant effects, either multivariate or univariate, were found. Also, no significant effects were due to the Level of Improvement factor for any of the samples. In other words, those who performed better on the Army assimilator did not do better on the TICS.

Effect of Culture Assimilator Training on Stereotyping. The stereotyping measure consisted of rating a set of person concepts on 10 attribute scales. The rating was done in terms of the probability of a scale concept, e.g., intelligence, being associated with a person concept, e.g., white colonel. There were two forms of the questionnaire (A and B), and subjects were given one before training and the other after training. The design was similar to that used for TICS.

A multivariate analysis of variance was computed for each person concept separately, with the 10 attribute scales as the dependent variables. The independent variables in this analysis were again Trained-Untrained (pretest, posttest) and Level of Improvement. The purpose of the assimilator was to reduce stereotyping so that, subsequent to assimilator training, stereotyping should be reduced; stereotyping should be reduced the most for those who improved the most on the assimilator. The multivariate and univariate analyses were again computed for three separate samples: (a) the sample of officers, (b) the enlisted sample that completed Volumes 1-2 of the assimilator, and (c) the enlisted sample that completed Volumes 3-4.

For the sample of officers, none of the multivariate F tests, looking at the Trained-Untrained differences, was significant for any of the 10 person concepts except for black colonels ($p < .01$). Any significant univariate F tests on any of the attribute scales for any person concepts

except black colonels can be attributed best to chance. Since the multivariate test for black colonels was significant, the 10 univariate F tests were examined to understand the nature of the differences apparently due to training. After training, black colonels were rated as more likely to be less intelligent ($p < .05$), lazier ($p < .001$, less active ($p < .05$), and and less hardworking ($p < .05$). These differences can be interpreted in two ways: a shift toward the region of uncertainty because most ratings shifted toward the middle of the scales, or a shift toward rating black colonels less favorably after training. In either case, results do not provide good evidence of reduced stereotyping as a result of assimilator training.

For both samples of EM, none of the preassimilator training/postassimilator training multivariate F's was significant. Again, these results do not provide evidence that the cultural assimilator reduced stereotyping. Consistent with the preceding results, Level of Improvement on the assimilator did not influence the stereotyping ratings for any of the three samples of subjects.

DISCUSSION

One of the most common approaches for race-relations training in the Army has been the use of discussion groups, or RAP seminars. In RAP seminars, soldiers might receive a formal lecture covering some aspect of black history or culture, or be involved in a discussion related to equal opportunity, or see a film. Each of these approaches has something to recommend it. However, the generally unstructured method of operation, as opposed to focusing on alternative behavior patterns and providing reinforcement when those patterns are elicited, does lead to a certain inefficiency in the use of both the instructor's time and the trainee's time.

The cultural assimilator offers an efficient method of presenting information about black culture, particularly role behavior, in a way that not only provides guidance on behavior but also reinforcement about alternative types of behavior. It can be used outside the traditional classroom; that is, trainees can proceed at their own pace in their own quarters. Some white junior officers may wish to learn more about black culture but find themselves uncomfortable in RAP seminars because of the possibility of confrontation. The cultural assimilator provides a way to learn about black culture in the Army in the privacy of their own offices, to prepare them better to handle race-related problems in their own units, without threat of confrontation or feelings of uneasiness.

Unfortunately, the evidence for the effectiveness of this assimilator was not uniformly favorable. However, the field conditions for testing the effectiveness of the assimilator, which were far from optimal, undoubtedly had a detrimental effect on the results. In terms of subject recruitment, soldiers sometimes were coerced into participating at the last minute. Random assignment of subjects, or at least a selection from

a broad range of units, generally proved largely unfeasible. On occasion, scheduling had to be at unfavorable times. The relative scarcity of black officers made it more likely that they had been previous subjects for another race-relations project or that pressure for their participation would be greater.

Sometimes there was self-selection at the unit level so that a substitute subject was sent. These self-selections might have contributed to such biases as selecting some of the most "expendable" persons in a given unit, or selecting some of the most interested or least prejudiced persons available. These kinds of self-selection biases were most likely among EM and white officers, and least likely among black officers, because of the difficulty in finding a black officer alternate.

Depsite the request for longer or multiple sessions, the researchers had to operate within a single 4-hour period per subject. There are several ways in which restriction to a 4-hour block of time affected the field tests. First, this restriction is not the way an assimilator actually should be utilized. Optimally, an assimilator should be completed over a series of sessions in private and at a subject's own pace. The 4-hour time period, in which the ancillary measures as well as the assimilator had to be completed, created time pressures for many of the subjects. Thus, the subjects' reading had to be hurried rather than proceeding at a more natural and relaxed pace. Carelessness and reduced concentration were more likely to occur. Fatigue was much more likely to be a significant factor in a subject's performance. With massed practice, subjects had little time to consolidate the information presented, whereas assimilators were anticipated to be more effective under distributed practice conditions. With distributed practice, soldiers would have a chance to absorb small amounts of information in many sessions.

Second, the single, 4-hour time frame created unfavorable conditions as far as the ancillary measures were concerned. Thus, these measures contributed to, and were affected by, the burden placed on the subjects, e.g., fatigue. The lack of time to consolidate the information made performance on the post-assimilator ancillary measures much less likely to be favorable. The evaluation of the assimilators undoubtedly was affected negatively by confounding with ancillary measures and the general burden of endurance placed on the subjects, i.e., the whole assessment process, and not just the assimilators, affected the evaluation of the assimilators.

Two primary factors, then, could have contributed to the poor performance of soldiers on the TICS and SQ after assimilator training. One factor may have been fatigue. The poorer performance on the TICS after training may have been caused by having to complete so many assimilator items and ancillary instruments in one 4-hour block. Fatigue may work in the direction of unfavorable changes from the pretest, when they were fresh, to the posttest, when they were tired. Assimilator training still could have an effect of improved performance but be overwhelmed by fatigue. Unfortunately, there was no control group to check this possibility.

One test for checking the possibility of fatigue is the degree of carelessness that might be reflected by greater variance in the posttest and pretest conditions. However, a Cochran C test for homogeneity of variance (Winer, 1971, pp. 207-208) indicated the pretest and posttest variances were not significantly different. This, of course, is not a conclusive test of the fatigue hypothesis that could have been provided with a control group.

A second important factor that could have contributed to the poor performance of subjects on TICS and the SQ was the problem related to massed practice, compared to distributed practice. Subjects may need time to consolidate the information conveyed by assimilator training so that massed practice with immediate testing of what has been learned may not be a fair test of what in fact has been learned. Subjects may not show evidence of learning until a period of weeks has passed and they have had a chance to absorb all the material presented, eliminating old concepts. The immediate effect of the assimilator may be confusion from the competition of competing concepts, i.e., the concepts taught by the assimilator and those held by the subject. The implication of this analysis is that subjects may do more poorly immediately after assimilator training, but they may actually improve after a period of several weeks when they have had a chance to consolidate new material.

Some data is consistent with this hypothesis. Weldon et al. (1974) tested the assimilator developed by Slobodin et al. (1972) in a laboratory setting using six groups of white university students. This is the assimilator that focused on black-white interactions in an industrial setting. No pretest measures were taken. All subjects were posttested on a combination of three attitude measures and one behavioral measure. Three of the groups received the attitude measures first and the behavioral measure second. The reversed order was used for the remaining three groups. For the behavioral measure, a black and a white student interacted using a two-person mechanical game. The black student was a confederate in the experiment and always assumed the role of subordinate to the white subject. The white student was naive as to the purpose of the behavioral experiment. After the short behavioral interaction was completed, the confederate rated the subject. The rating of the subject by the confederate varied, depending on whether there was a time delay between assimilator training and the behavioral test. When subjects went directly into the behavioral setting from the assimilator with no time for consolidation, the confederate preferred the untrained subjects. When subjects went from the assimilator to the attitude measurement and then, after a period of time for consolidating assimilator material, into the behavioral setting, the confederate preferred the trained subjects.

What is learned in the assimilator may require time to be consolidated with existing knowledge and behavior patterns. Interaction before consolidation occurs may confuse the subject because he has learned that his attributions are incorrect but has not yet developed behaviors appropriate to his new knowledge. Faced with an interaction, the trainee may

vacillate; and this may be perceived by a black confederate as "wishy-washy" behavior. If it does take time to consolidate assimilator material, then the assimilator should be given over spaced intervals. Discussion of assimilator items in RAP seminars may help the consolidation process.

A third possible explanation for the posttest decrease on the TICS has to do with the particular key used to determine the weights for each option. The Weldon et al. (1974) Key gives the greatest weight to joint sample (black and white) agreement on an alternative and next greatest weight to the alternative chosen most frequently by the black sample. It may well be the case that subjects begin to reject the former class of options (joint agreement) as a function as assimilator training, seeking instead those answers that blacks, but not whites, would accept. Operating in this mode, the weighted scores would decrease.

It is also possible that while the decrease could be due to a shift to options on which there is less shared agreement, the responses finally chosen would be different for blacks and whites; that is, the blacks choosing responses acceptable to blacks <u>but not</u> to whites, and the reverse for whites. However, if this were the case, given the slight bias in the key for black agreement, there would be a racial difference in TICS scores in favor of the blacks. This was not the case.

What might be happening--and inspection of the data lends some support to this supposition--is that, after training, whites are moving from a "joint" agreement alternative to a "black" alternative; and blacks are doing the same. Another way of viewing these shifts is that both blacks and whites initially choose more "socially acceptable" alternatives. After training, both races move toward alternatives truer to a black perspective. This would result in an overall movement away from joint agreement responses and a subsequent drop in TICS scores as keyed by Weldon et al (1974).

Acceptance of the Weldon Key depends on the assumption that applies to an Army sample. The Weldon Key was based on a contrast of middle-class white students with hardcore unemployed blacks from a St. Louis ghetto. It is likely that some information conveyed in the Army-based assimilator contradicts that conveyed in the civilian-based assimilator.

The Army assimilator was also evaluated by asking subjects how they liked assimilator training compared to three other types of race-relations training. Overall, <u>all</u> the race-relations techniques were positively rated by both blacks and whites in the sense that the mean ratings for all groups were on the positive side of the scales' midpoints. The assimilator training, however, was rated less favorably than RAP seminars and about as favorably as manuals on minority culture. Fatigue again may have been one reason the assimilator was not rated more favorably.

Overall, the data from the ancillary instruments were not encouraging. The ancillary instruments included evaluative information about the Army assimilator that was not part of the assimilator itself. The

ancillary instruments included the CEQ, TICS, and the SQ. In spite of the various reasons given for unfavorable results in these scales, the fact remains that some data from each of these instruments were not favorable. It is important to try to identify the reasons for these unfavorable results.

In this regard, it may help to look at collected data that were internal to the assimilator itself. The data as a whole were much more favorable. Results of the familiarity rating, for example, were clearer and even more favorable than on preliminary work on the Army assimilator. Without exception, black soldiers found assimilator items more familiar to them, based on their experiences in the Army, than did white soldiers. This would be expected because the assimilator is designed to teach about black culture in the Army. The data suggest that the scenarios presented in the assimilator represented commonly occurring black/white interracial interactions in the Army with which black soldiers, by virtue of their minority status, were very familiar. The data suggest that the scenarios were realistic and represented black culture in the Army.

There were differences by rank on the assimilator items for black soldiers, with black officers more familiar with the scenarios than black EM. There were no differences by rank in the responses of white soldiers. Both white officers and white EM were relatively unfamiliar with the scenarios. Again this pattern of responses would be expected for scenarios designed to teach junior officers about black culture. Many scenarios included officers as the protagonists, and black EM should be less familiar with these situations than black officers.

The familiarity data suggest that the assimilator scenarios could be used as the basis for discussion in RAP sessions, providing useful information about commonly occurring sources of black-white misunderstanding in the Army.

For an assimilator designed to teach about black culture in the Army, blacks should perform better than whites. In general, performance results parallel those for familiarity, although differences between black and white performance on the assimilators were not as clear-cut. Without exception, the direction of differences pointed to superior black performace. Black officers and black EM performed better than white officers and white EM, respectively. Some items were identified that should be reviewed for possible rekeying. This would seem to confirm the possible utility of the assimilators in race-relations discussions. Since the "correctness" of some alternatives can be questioned, useful and productive debate might be possible in a RAP session.

The other information about the assimilator internal to the assimilator itself is evidence related to learning over time. Systematic performance increases on the assimilator through the first 40 items produced a sharp upward curve. The obtained learning curves suggest that the obtained

performance increases were not simply attributable to "test wiseness." The curves were more indicative of real learning occurring, at least over the first 40 items.

However, the learning curves for blacks and whites raise another question. Both black and white soldiers showed similar improvement over time. Black soldiers by definition already know about black culture in the Army; so if the assimilator is really teaching about black culture in the Army, why should blacks be learning nearly as much as whites? Blacks, ideally, should have shown a high level of learning throughout and not such a drastic improvement. Whites were expected to learn, but blacks were expected to know already much of this information. The scenarios were very familiar to blacks as mentioned previously. However, what blacks appear to be learning, as well as whites, is the "correct" answer, which they should already know if the questions and four alternative answers were written adequately. The data suggest blacks were learning something they didn't know, which suggests the questions or "correct" answers were not written clearly from the point of view of black culture in the Army.

If the suggestion is factual, it could account for the less than favorable results found with the ancillary instruments. If the questions and "correct" answers provide the basis for problems identified with the assimilator, the scenarios still seem to provide useful and valid information for discussion in RAP seminars.

The impact of the assimilator on learning improved substantially over the predecessor instrument, but this peaked out after about 40 items. Because this situation occurred under conditions in which an assimilator was completed in one session, learning could improve and the upward trend continue further under more optimal, self-paced conditions.

The inverted U-form of the learning curve obtained for difficult items needs additional comment. The downward direction of the curve for the other items could have been caused by fatigue. However, enlisted soldiers who took only Volumes 3-4 and were not as fatigued also showed this downward movement, which tends to discount this possibility.

Volumes 1-2 differed from Volumes 3-4 in one major aspect: All but a few items of the first two volumes, by happenstance, involved situations in which the conflict was found on some Army-related task. Close to half the items of the last two volumes, by contrast, involved situations that dealt with nontask, non-Army interaction. Apparently, then, subjects do better and learn better on items where conflict interferes with some salient task. Why is this so?

It is likely that task and social interactions differ in two major ways. First, the level of agreement in the population on the "correct" attributes may be less for the social item; that is, in performing a job-related task, generally there is considerable agreement on a criterion for the completion of the task and on permissible behaviors on the job.

Social situations inherently contain more variability. Guidelines for what must be done in social situations are weaker, particularly when they pertain to interracial disagreement. Thus, the variation in acceptable behavior is greater.

Our findings are consistent with Minard's findings in the classic coal-field study (Minard, 1952). Minard found that there was considerable interracial interaction among coal miners as long as they were on the job. However, once they left the mine, there was virtually no interaction. In our case, it may be that task items function well because the "lesson" to be learned does not conflict with attitudes vis a vis job performance. Carrying those lessons over to the nonjob setting is contrary to the norms of such settings. If this hypothesis is true, it is probable that more vigorous programs will be necessary to change nontask attributions.

A second plausible reason for the disparity in performance is that there may be different levels of motivation to succeed on the two types of items; that is, a subject may want good working relationships with members of another cultural group and see such relationships as necessary for his career. However, social interaction may be viewed as less essential, and the desire to develop different patterns of behavior here may be considerably muted.

In summary, then, consensus may be more difficult to obtain on socially oriented items. Only task-oriented items perhaps should be used in Army assimilators. The most pressing needs are in the area of on-the-job performance; in this area, task items may serve best. In any case, the last 20 items in the current assimilator fail to show appropriate learning curves and may not be useful for inclusion in a final version of the assimilator for this reason.

Some data were provided in this report on the optimum format for assimilator production, either a linear or branching format. The linear format requires subjects to respond to all answers, whether they are correct or not, while the branching format allows subjects to move on once they have identified the correct answer. The branching format obviously reduces the time taken to complete an assimilator and reduces redundancy, whereas at the same time it is more compatible with Army training materials

In the past (Landis et al., 1973; Malpass & Salancik, 1972), the linear format has produced a slightly higher level of learning than the branching format for difficult items. For the present assimilator, rationales for various answers were made more comprehensive. Under these conditions, the learning curves using the branching format were quite steep, suggesting the subjects were learning quickly; the branching mode, as well as being practical, produced efficient learning.

CHAPTER 2

An evaluation of a cultural assimilator was described in chapter 1. The assimilator was designed to teach white junior officers about black culture in the Army. The data from the evaluation of this assimilator raised some questions about its effectiveness. There was good evidence that both the black and white officers taking the assimilator were learning something, at least on the difficult task-oriented items, because of the learning curves that were obtained using these items. The questions that arose from this evaluation had to do with whether the subjects learned something to increase their effectiveness in race relations. The evidence related to the external validity of the assimilator was rather meager in the preceding evaluation. Much of the evidence that was obtained pointed in the wrong direction, i.e., the assimilator producing reduced effectiveness in race relations. However, there were a variety of plausible, rival explanations for these negative findings, including fatigue, the necessity for time delays to allow subjects to consolidate materials, and inappropriate keying of test items.

The purpose of the next assimilator evaluation reported in this chapter was again to address the important question of whether assimilator training teaches something that increases junior officers' effectiveness in race relations. This question was raised again in a setting in which fatigue and time for consolidation of assimilator information were not issues. However, whether the questions and alternative responses are keyed correctly for the "right" answer is still of concern and was tested here.

The question of whether junior officers learn something that increases their effectiveness in race relations is one that, for purposes of external validity, can be addressed best in a field setting. What we need to know is whether the knowledge gained by junior officers on the assimilator has a favorable effect on their subordinates of all races during the actual performance of their jobs in the field. Knowledge of black culture in the Army should have a particularly favorable impact on black subordinates. Commanders then would be able to demonstrate awareness of concerns of these subordinates.

To get at the issue of the subordinates' evaluations, assimilator performance was measured for a sample of company commanders. The assimilator performance then was correlated with black and white enlisted soldiers' evaluations of their commanders in the area of race relations. The study attempted to answer this question: Is knowledge of the information conveyed in the assimilator related to favorable evaluation by subordinates of the commanders' performances in race relations? This sort of data is, of course, correlational in nature and cannot demonstrate direction of causation. However, if assimilator information produces a favorable impact upon the commanders' subordinates, a positive correlation should be found between the commanders' performances and the favorableness of the evaluation of commanders by subordinates (assuming causation is not delayed). Lack of a positive correlation would imply that the commanders'

information acquired from an assimilator does not have a favorable impact, at least immediately, on subordinates.

Because correlation does not prove direction of causation, a positive correlation, as indicated above, also could mean that commanders' effectiveness in race relations (as perceived by subordinates) produces an increase in knowledge about black culture. Direction of causation will be addressed in chapter 3. For the present, we merely wish to see whether there is a positive correlation. If none exists, assimilator training will probably not increase effectiveness in race relations, at least as seen by subordinates.

METHOD

The data reported here were collected as part of a larger project that involved evaluating racial harmony training for company leaders. Greater detail about procedures is provided in Hart (1978). Fifty companies from two installations participated in this project. Companies were used as the unit of analysis for correlations reported here.

Company commanders completed 15 items from the cultural assimilator developed by Kirkland and McGrew (1975). Details of the development of this assimilator are reported in chapter 1. The items were presented in test format in which the question about each scenario was followed by four alternative responses, without indicating the correctness of an alternative. The 15 items selected were the most difficult task-oriented items.

As reported in chapter 1, subjects of all races learned fastest on the difficult items, as well as the items classified as task-oriented, i.e., scenarios dealing with racial misunderstanding on the job. Because subjects learned the most quickly on these items, the most difficult task-oriented items were presented to commanders to see if their knowledge on these items (the ones that other leaders had learned from previously) was related to favorable perceptions by subordinates.

Survey respondents were subordinates of the 50 company commanders who had taken the assimilator test. The respondents were EM between the paygrades of E1 to E4, who were randomly selected from each company. Sampling was stratified by company and race so that approximately 6 white, 5 black, and 3 Hispanic (Puerto Rican and Mexican-American) soldiers from each company were randomly selected to participate, producing an enlisted sample of approximately 700 respondents.

Several makeup sessions were provided for soldiers who missed the first survey, as well as a list of randomly selected alternates for soldiers who had left the unit by the time of the survey. For these reasons, virtually 100% of the number of soldiers requested was obtained. Only 17% of the soldiers requested to attend from the unit failed to take the survey and were replaced by randomly selected alternates. Bias caused by replacing soldiers with alternates was minimal because of the wide variety

of reasons for not taking the survey, e.g., hospitalization, sickness, AWOL, jail, school, conflicting duties.

Women were excluded from the sample because they are excluded by law from combat companies, which constituted the majority of the companies here. The survey was given in January 1976.

Enlisted survey respondents rated their commanders on the following three variables: (a) the Racial Policies Scales; (b) on the question, "Overall, how effective do you think your company commander has been in dealing with racial problems in your unit?" and (c) on the question, "Overall, do you feel that racial problems exist in your unit?"

The Racial Policies Scale consisted of the enlisted soldiers' responses to the following five questions: (a) "Does your company commander allow language in your company that some people find racially offensive?"; (b) "Does your company commander emphasize to everyone in your unit a policy of treating each individual equally and fairly?"; (c) "Does your company commander encourage enlisted men and officers to participate actively in race-relations seminars or councils?"; (d) "Does your company commander feel uncomfortable talking about racial issues and wait for others to bring up the subject before talking about racial issues?"; and (e) "Does your company commander encourage everyone in the unit to discuss complaints of on- and off-post discrimination with you?" Respondents answered on an 8-point scale defined by the end words "Very much" versus "Not at all." Answers were coded so that a high score reflected favorable race-relations policies. In previous research, this scale has been found to have an adequate reliability ranging between .74 and .94 (Laszlo, McNeil, Hart, & Thomas, 1978).

Each soldier's responses to the racial policies questions were averaged to form a scale. At this point the responses of the black, white, and Hispanic enlisted soldiers within each company were averaged separately by racial group for each of the three variables: (a) the Racial Policies Scale, (b) Commanders' Effectiveness with Racial Problems, and (c) Racial Problems in the Unit. The company was the unit of analysis for the computed correlations. For this reason, the average response of the black, white, and Hispanic soldiers within each company was obtained for each of the variables. In this way soldiers' estimates of their commanders' policies and effectiveness and the companies' racial problems could be correlated separately for each racial group with the commanders' performances on the assimilator.

RESULTS AND DISCUSSION

Knowledge of black culture among company commanders, as defined by assimilator performance, should have a favorable impact upon subordinates if the assimilator teaches information that improves the commanders' performances in race relations. Knowledge of black culture should have a favorable impact, particularly upon black subordinates; commanders would

demonstrate knowledge of the culture that is part of the lives of black subordinates. However, the commanders' knowledge of black culture also should be related to perceived effectiveness in race relations among whites and Hispanics as well; that is, if the groups observe a greater harmony between the commanders and blacks and feel the commander is fair to all groups.

The correlation, then, between the commanders' performances on the assimilator and the black subordinates' evaluations of the commanders' effectiveness should be significant and perhaps larger than the same correlation for whites and Hispanics. Correlations obtained between the commanders' performances on the assimilator and the evaluations of the commanders' performances by each racial group are presented in Table 6.

Table 6

Correlations of Commanders' Assimilator Performances with Subordinates' Evaluations of Their Commanders

Questionnaire items	Black EM	White EM	Hispanic EM
Racial Policies Scale	.01	.21	.48**
Commanders' effectiveness with racial problems	.18	.31*	.16
Racial problems in unit	-.10	-.01	.01

Note. A positive correlation (Pearson r) indicates the better the commander performed on the assimilator, (a) the more favorably the commanders were seen on the Racial Policies Scale, (b) the more effective they seemed with racial problems, (c) the fewer racial problems existed in their unit. Correlations were based on N = 50 companies.

* $p < .05$, two-tailed test
** $p < .01$, two-tailed test

Table 6 shows no significant correlation between the commanders' knowledge of black culture as measured by the assimilator and enlisted soldiers' estimates of the existence of racial problems in the unit. There were, however, significant positive correlations between the commanders' assimilator performances and white and Hispanic enlisted soldiers' estimates of the commanders' effectiveness with racial problems. The correlations were in the expected direction, with a greater level of knowledge demonstrated by commanders associated with greater effectiveness and

more favorable racial policies. None of the correlations was significant, however, for the black subordinates. This is the target group that should have shown the strongest positive correlations if the assimilator items truly reflect black culture in the Army.

It was noted in chapter 1 that blacks as well as whites learned on the assimilator, whereas blacks already should have known the "correct" answers. The assimilator scenarios were very familiar to blacks, but the correct answers were not always familiar. The data shown here suggest that assimilator performance was related to perceived effectiveness among white and Hispanic but not black subordinates. In other words, it looks as if the questions and corresponding "correct" answers may not always be reflecting black culture in the Army. The assimilator responses may sometimes be reflecting a white conception of what the black culture in the Army is.

To investigate this possibility in greater detail, the commanders' responses to each alternative for a given item were correlated with the black, white, and Hispanic soldiers' evaluations of their leaders. The commanders' responses to the first alternative for the first item was dichotomously coded "1" or "0," depending on whether a commander had selected that alternative. The same was done for the other three alternatives for item 1, and for each of the other items. The dichotomously coded variables were then correlated with the enlisted soldiers' evaluations of their leaders.

Of course, careful attention was paid to the distribution of the commanders' responses to the various alternatives, as well as the correlations because the distribution of the dichotomously coded variables obviously would affect the size of the correlations obtained. In some cases the correlations could not be computed because no commanders selected some alternatives.

The obtained correlations did provide one criterion for determining whether the response alternatives labeled as "correct" were related positively to the black subordinates' perceptions of the commanders' effectiveness in race relations. Also, the criterion determined whether another response alternative would have been a better choice from the point of view of the black subordinates' evaluations of the leaders. The correlations provided insight into whether the same response alternative was related to favorable evaluations for all racial groups, or whether one alternative was related to favorable perceptions by whites only, or the reverse.

Using these criteria, it became apparent that several of the "correct" answers for the 15 items used were not actually correct from the point of view of the black subordinates' perceptions of their leaders and should be recoded. On several items the correct answer differed for blacks and whites. For other items, it was difficult to identify which alternative should be correct, using the criteria of the subordinates' evaluations.

In summary, this analysis cast some doubt on a number of the response alternatives and the degree to which a current alternative for these items could be considered correct. The "correct" answer for some items did, in fact, seem to reflect the white subordinates' perceptions of good race relations more than the corresponding perceptions for blacks.

The fact that assimilator performance was related to favorable perceptions by whites and Hispanics, but not for blacks, may be important in a practical sense, even though it was not entirely what was expected. There is some evidence in recent Army surveys (Hiett & Nordlie, 1978) of a growing "backlash" among whites who are concerned with reverse discrimination. For this reason, knowledge on an assimilator that is related to positive perceptions among whites and Hispanics may be important for practical reasons.

CHAPTER 3

A third evaluation was conducted of the cultural assimilator developed for teaching white junior officers about black culture in the Army. One purpose of this third evaluation was to address the question of causation that was brought up in chapter 2 but not answered.

In chapter 2, company commanders' performances on the cultural assimilator were correlated with the ratings of subordinates about the commanders' effectiveness in race relations. High assimilator performance was related to favorable ratings of performance in race relations by white and Hispanic subordinates. A positive correlation does not demonstrate that knowledge of black culture as measured by assimilator items caused these more favorable evaluations by subordinates. It may be that a generally favorable climate between superiors and subordinates produced increased knowledge. Or, the positive correlation may have resulted from an extraneous third variable that caused both of the variables in question to be correlated together. A more rigorous experimental design was established in this third evaluation to provide a better answer to the question that was raised in chapter 2 about causation.

A second important issue that was studied in this third evaluation was how the assimilator could be used as a race-relations training technique in conjunction with the other training techniques. How might it be implemented effectively? Should the Army assimilator be used as a stand-alone technique by junior officers in the privacy of their quarters, or should assimilator scenarios be used as training aids in race-relations discussions? Enough doubts have been raised in previous research about the appropriateness of the designated "correct" answers so that the use of the assimilator as a stand-alone technique does not seem warranted, unless discussion and even debate about possible alternative answers are provided.

For this reason, it seemed that one useful way to implement the assimilator in the field as a race-relations technique was in a 1-day seminar in which both assimilator training and group discussion about assimilator scenarios would be used. Discussion about the appropriateness of various alternative answers would be provided and encouraged in this setting.

Another place where it might be natural to implement assimilator training is in the Army Reserves. In the reserves, it is more difficult for soldiers to meet together, so a technique that allows soldiers to study by themselves to some extent may be useful.

For these reasons, an experiment was designed to test the effectiveness of the Army assimilator in the Army Reserves, using a 1-day seminar in which participants had the opportunity both to go over assimilator items and to discuss them with their peers and trained race-relations instructors. The experiment was conducted among a population of reserve command personnel. The design of this field experiment was rigorous in

the sense that participants were randomly assigned to an appropriate experimental and control group. A design of this type allows us to answer the question about causation raised previously: Does assimilator training produce a favorable impact upon subordinates?

METHOD

Experimental Design

The experiment was conducted among a population of reserve command personnel. Command personnel were defined as senior NCOs (E7-E9) and officers (O1-O4). One major unit from the 6th Army Reserve command participated in the assimilator evaluation experiment. Eighty command personnel (E7-E9) were randomly selected from the rosters of this 6th Army Reserve Unit to participate in the experiment. Of these leaders, 40 were randomly assigned to an experimental group and 40 to a control group.

Leaders assigned to the experimental group were directed through the chain of command to participate in a 1-day race-relations seminar in the spring of 1977. Participants assigned to the experimental group received training in a single 1-day seminar that involved assimilator training and group discussions of assimilator scenarios, whereas participants assigned to the control group received no training.

Approximately 2 months after the training occurred, three separate groups of respondents completed a survey instrument designed to evaluate the effectiveness of the training. Two months included two reserve meetings subsequent to the time of assimilator training, which seemed an appropriate time for measuring any changes in race-related behaviors. The 80 participants in both the experimental and control groups received a survey in which they evaluated their own behaviors, primarily in terms of how they had responded to race relations/equal opportunity situations in their own units since the time of the training session. The second group that received a survey were immediate subordinates of participating leaders assigned to the experimental and control group. The three immediate subordinates of each participating leader completed a survey designed to evaluate the race relations/equal opportunity performance of the participating leader during the time period since training had occurred. The immediate supervisors of the participating leaders also received a survey to evaluate the participating leaders. The participants themselves, the three immediate subordinates, and the immediate supervisor of each participant then completed a survey.

The surveys for the three groups were identical, with one exception. The questions were phrased so that participating leaders evaluated themselves in their responses to the 48 survey questions, whereas subordinates and supervisors rated the participating leaders. The questions asked of the subordinates and supervisors are shown in the appendix.

Ratings were made on 5-point scales and, in most cases, estimated how frequently a given sort of behavior occurred, from "very frequently" to "never." Although subordinates and supervisors who completed these questionnaires were not told whether the leader they were rating had received training, possibly some people were aware of whether this person had received training.

This survey procedure evaluated the relevant equal opportunity/race relations behavior of the participating leaders from three different points of view: the leaders themselves, their subordinates, and their supervisors. A primary purpose of the evaluation experiment was to see whether the assimilator training of command personnel would have a favorable impact on the people with whom they worked. For this reason, the impressions of subordinates and the supervisor were important. It was not possible to separate the evaluations of subordinates by race or to examine the impressions of black subordinates of their leaders compared to white subordinates because there were few blacks in many of the reserve units, and some participating leaders had no immediate black subordinates. There are certain biases involved in self-ratings that need to be balanced by the point of view of the soldiers who worked most closely with the participating leaders during the reserve training weekends. The immediate subordinates and the supervisor of these participating leaders worked most closely with the participating leaders during the reserve training times subsequent to the assimilator seminar and should be in the best position to observe relevant behaviors of the participating leaders.

The basic comparison that was made in this experimental design was the comparison between those randomly assigned to the experimental (trained) group and those assigned to the control group. The participating leader served as the unit of analysis so that subordinates and supervisors were assigned to the experimental or control group corresponding to the experimental-control designation of the participating leader with whom they were associated. If the sort of assimilator training provided in the 1-day seminar was effective, participating leaders assigned to the experimental group should be evaluated more favorably in race relations by themselves, by subordinates, and by superiors than participating leaders assigned to the control group.

Assimilator Seminars

The assimilator seminar was directed by a multiracial team of reserve officers who had received training in race relations at Defense Race Relations Institute. With one exception, command personnel receiving training were white. After appropriate introduction at the seminar, command personnel responded to the first 20 assimilator scenarios in the standard programed learning format. The group then divided into smaller groups, led by a trained discussion leader, for the purpose of discussing the scenarios and the race-related issues raised by the assimilator scenarios. Participants later completed the next 20 assimilator items, after

which they again broke up into groups to discuss the race-related issues raised by the assimilator. Group discussion was again facilitated by trained leaders. The last 20 assimilator items in the original version of the assimilator (Kirkland & McGrew, 1975) were not used because previous research had identified problems with the learning curves with these items.

The command personnel also were presented with blocks of instruction on (a) personal prejudice and institutional discrimination; (b) an overview of the history and contributions of several minorities in the United States, in this case including Native Americans and Jewish culture; and (c) a discussion of "who shall survive," based on a hypothetical situation where some, but not all, participants must be selected to die. These blocks of instruction were spaced between assimilator training and discussion.

The assimilator training seminar generally was well received by the participating leaders. The assimilator scenarios provided a means for controlling the hostility that sometimes can be generated in race-relations discussions with command personnel. Any anger that arose was largely directed toward the scenarios, or particularly the correctness of the designed correct answers, rather than at fellow participants or discussion leaders.

The scenarios themselves usually led participants to discuss similar or related race-relations situations they had been involved in or had become aware of in their own Army careers. The scenarios led to the discussion of personal experiences or concerns important to participants. Based on the observation of the trainers, the assimilator was a helpful tool for presenting race-related material in a seminar of this nature.

Samples Actually Obtained

Unfortunately, there was a serious attrition problem in the samples actually obtained compared to those requested. Only 22 of the 40 command personnel assigned to the experimental group (55%) actually attended the assimilator training seminar. Despite this attrition in the trained experimental group, an attempt was made to survey all 80 of the original command participants as well as their supervisors and subordinates, as called for by the original experimental design. Three subordinates for every leader participant were requested for a total sample of 240 subordinates. Only 38 of those requested (16%) actually completed the survey. Of the supervisors, 80 were requested and only 23 were obtained (29%). Of the 80 participating command personnel, only 32 completed the survey (40%).

Statistical Analyses

The high attrition rate in the data obtained created serious problems for interpreting results, given an experimental design. Problems arose

because the experimental and control groups were equated no longer as they had been originally through the process of randomization. In other words, the experimental and control groups were no longer equal except for the training that occurred. A variety of other selection factors may distinguish the experimental from the control group. Self-selection factors in attendance at the assimilator seminar and self-selection in taking the survey could provide plausible rival explanations for any differences found between the experimental and control group. If trained participants in the experimental group were rated more favorably by themselves and their associates than those in the control group, this could be due to differences that already existed between the groups. In other words, soldiers may have attended training who were already favorable toward race relations, and the favorable ratings of this group may reflect nothing more than this.

To help control for selection biases that may have occurred in seminar attendance, two comparisons were made: one between those who were trained versus those who were not; and a second more conservative comparison between those originally assigned to the experimental group, regardless of whether they actually attended the training session, and those originally assigned to the control group. Both types of comparisons were made using self-ratings and ratings of supervisors and subordinates. The trained versus untrained comparison gives us an idea of whether training produced an improvement. However, even if this test does show significant differences, it is still subject to the sort of selection biases indicated above; interpretation may be ambiguous for this reason.

In order to help rule out selection biases, the experimental versus control comparison was made. The test is conservative in that untrained persons originally assigned to the trained group are included as if they were trained persons, making significance more difficult to obtain but also ruling out the particular selection bias associated with the participating leaders who chose to attend training. If this test is significant, improvement more likely can be attributed to training, although these may still be selection biases among those who chose to take the survey.

The low survey participation rate created other problems. It is unclear what sort of selection biases may have been produced by the low participation rate between the experimental and control groups. However, participation was so low that it was likely not to have been much different than a random sample of those who were requested to participate in both the experimental and control groups, in which case selection biases would have been minimal.

The low survey participation rate, however, did produce a different sort of problem with the data analyses. Technically, the participating leaders provided the unit analysis so that when more than one subordinate rated a given leader, the responses should have been averaged. Also, it would have been good to separate the data analysis for supervisors from that for subordinates. Unfortunately, the preceding approach would have

reduced the degrees of freedom for making the desired statistical tests below that needed or desired. For this reason, individual respondents were used rather than averages, and ratings of subordinates and supervisors were combined in some analyses in order to increase degrees of freedom. Admittedly, this approach is not ideal, but the data attrition was so severe as to render results from any data analysis as suggestive rather than conclusive.

One-way multivariate analyses of variance on the 48 dependent variables were computed using the combined sample of supervisors and subordinates. Both the trained-untrained and the experimental-control comparisons were made. The analysis was followed by computing t tests for each of the 48 items, for both trained-untrained and experimental-control comparisons.

Significant differences on individual items should be examined only when these differences are preceded by a significant multivariate test. Because such a large number of individual comparisons were made with t tests, some would be expected to be significant on the basis of chance alone. A significant multivariate test indicates that real differences not due to chance are among the individual comparisons.

For descriptive purposes, t tests were also computed on all dependent variables separately for the three samples: (a) leader participants, (b) subordinates, and (c) supervisors. It was recognized that this procedure would produce some significant t tests that were in fact due to chance because of the large number of tests that were made. For this reason the number of significant t tests were compared to the approximate number that would be expected to be significant on the basis of chance alone, assuming the tests were independent.

RESULTS AND DISCUSSION

Based on the combined sample of supervisors and subordinates, the multivariate F test was not significant for either the trained versus untrained comparison ($F = 1.28$, n.s.) or the experimental-control comparison ($F = .92$, n.s.). Examining the individual t tests for this combined sample, there were three significant differences ($p < .05$, two-tailed) in the expected direction with the experimental versus control comparison and two significant differences in the expected direction with the trained versus untrained comparison. Approximately two or three comparisons would be expected to have occurred by chance alone so that these results appear to be due to chance, just as was indicated by the multivariate test.

The self-ratings of the participating leaders were analyzed with t tests as indicated previously. There were three significant differences ($p < .05$, two-tailed) out of 48 tests in the trained versus untrained comparison. Two of the differences were in the expected direction and one was in the opposite direction. With the experimental-control comparison, four significant differences were found; but three of these

differences were in the "wrong" direction. These results, again, look very much like chance effects because two or three differences might be expected by chance in either direction.

Based on the sample of subordinates alone, t tests were computed for all dependent variables. There was one significant difference in the expected direction with the experimental versus control comparison, and one significant difference in the opposite direction in the trained versus untrained comparison. These effects were again apparently due to chance. With the sample of supervisors alone, there were no significant t tests with the experimental versus control comparison, but there were five significant differences in the expected direction for the trained versus untrained comparison.

If these latter effects were not due to chance, they could have been due to selection effects, because the experimental versus control comparison was not significant. They could have been produced by the supervisors' knowledge of who had been trained. Supervisors may have had favorable expectations of those who had been trained, or perhaps there was a self-selection factor so that the trained leaders were those who were already the most favorable in the first place.

In summary, the results do not provide evidence that the assimilator training had a favorable impact on either the participants themselves or their supervisors or subordinates. The differences that were found can best be interpreted as being due to chance. These results are suggestive rather than conclusive because of the small amount of data actually collected and the consequent interpretive problems.

Chapter 2 provided some evidence that knowledge of black culture as measured by the assimilator was related to favorable race-relations performance as viewed by subordinates. Unfortunately, the results of this last experiment did not clear up the question that was raised in chapter 2 about the direction of causation. The positive correlations found in chapter 2 might have been because of a favorable race-relations climate producing increased knowledge of black culture, rather than the reverse. Because the results reported in chapter 3 were not significant, we cannot rule out this possibility.

The test of the effectiveness of the assimilator in this experiment was rather stringent, requiring that a 1-day seminar have favorable impact on both supervisors and subordinates, as well as participants themselves, over a 2-month time span. The assimilator might have been able to pass a less stringent test. In this regard, the assimilator still may be useful as a training aid for race-relations seminars, keeping in mind that it will not likely have a strong impact and may have no impact at all. Questions raised in previous chapters about the correctness of alternative answers also should be kept in mind if the assimilator is used as a training aid in race-relations discussions.

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APPENDIX

ASSIMILATOR SURVEY QUESTIONS

1. Has this person encouraged blacks and whites to work and attend unit social functions together?

2. Have the actions of this person motivated blacks to feel proud of their unit?

3. Has this person treated blacks and whites the same or differently in the area of haircuts and personal appearance?

4. Is this person willing to help both the black and white enlisted personnel with their personal problems?

5. Has this person tried to insure that blacks are given a fair share of the available training opportunities?

6. Has this person talked about the need to recruit blacks/minorities in the reserves?

7. Has this person shown concern for recruiting women and minorities into the reserves?

8. Do both the black and white enlisted personnel respect this person?

9. Has this person recommended black and white enlisted personnel for promotion on an equal basis?

10. Has this person given blacks an opportunity to attend leadership academies?

11. Has this person given blacks assignments that are less important than those given to whites?

12. Has this person been effective in resolving conflicts when conflict situations arise?

13. Does this person praise the work of the black and white enlisted personnel?

14. Does this person encourage blacks to attend unit social functions?

15. Suppose you were promoted (or transferred) into this person's job replacing him/her. Would you do his/her job bettern than he/she is doing it now?

16. Has this person used race as a basis for making assignments?

17. Has this person spent any time socializing with black enlisted personnel?

18. Does this person work well with blacks?

19. Have you observed favorable changes in the manner that this person talks to blacks in the unit?

20. Does this person work hard to insure the timely promotion of all enlisted personnel?

21. Has this person encouraged both black and white enlisted personnel to take correspondence courses or otherwise continue their education?

22. Has this person allowed racial discrimination to exist in your company?

23. Has this person made favorable comments about the quality of race-relations training in the reserves?

24. Has this person spent any time socializing with white enlisted personnel?

25. Does this person work well with women?

26. Have you observed favorable changes in the manner that this person talks to women in the unit?

27. Has this person denied a black soldier his promotion for reasons that were unclear?

28. Has this person encouraged blacks to attend OCS or acquire a secondary MOS?

29. Suppose you were promoted (or transferred) into this person's job replacing him/her. Would you do a better job at <u>race relations</u> than he/she is doing now?

30. Has this person made unfavorable comments about the quality of race-relations training in the reserves?

31. Has this person made the requirements for promotion known to all enlisted personnel?

32. Has this person given blacks recognition for achievement in the areas of training and leadership development?

33. Have blacks been involved at NCO call?

34. Has this person tried to insure that women are given a fair share of the available training opportunities?

35. Has this person encouraged friendships between black and white enlisted personnel in your unit?

36. Has this person expressed to someone a desire to improve race relations in the unit?

37. Does this person appear to be as socially courteous with blacks as with whites?

38. Does this person like soldiers in your reserve unit to have both black and white buddies?

39. How effective do you feel this person would be in leading race-relations seminars/classes?

40. Has this person tried to get better acquainted with enlisted personnel who belong to racial and ethnic groups that are different than the one to which he/she belongs?

41. Will this person correct subordinates for using rude language when referring to blacks in the unit?

42. Will this person correct subordinates for using rude language when referring to women in the unit?

43. Will this person be effective in reducing any conflicts that may arise between blacks and whites in your unit?

44. Are you aware of this person referring to blacks in negative terms when no blacks are present?

45. Has this person been able to work harmoniously with persons who are racially or ethnically different than himself?

46. Are you aware of this person referring to women in negative terms when no women are present?

47. Has this person been involved in conflicts with persons who are racially/ethnically different than himself?

48. Has this person been effective in resolving conflicts with persons who are racially/ethnically different than himself?

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